Abstract

Reversible image authentication has drawn a great attention for its ability to recover the original image from the watermarked image. The primary concern of authentication is to prevent from unauthorized manipulation of the image and hence has attained good importance. This paper proposes a block based reversible watermarking scheme for image authentication based on histogram modification of the differences between adjacent coefficients using DWT. A content watermark is computed from the image wavelet edge features (WEF) and is inserted into the vertical (LH) subband in a reversible manner. The proposed scheme restores the original image without any distortion from the marked image after the hidden data have been extracted. Also can detect and localize tampered areas of the watermarked image. Experimental results demonstrate the performance of the proposed scheme.

References

- Schneider M, Chang S-F, 1996. A Robust content based digital signature for image

transform domain, World Academy of Science and Technology, 13 pp 86-89.

**Index Terms**

Computer Science  
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**Keywords**

Image authentication  
Reversible data hiding  
Simple hash  
Tamper detection